Externally Applied RF for Pulmonary Vein Isolation

ABSTRACT OF THE DISCLOSURE

A resonant circuit is incorporated in a stent, which implantable in a pulmonary vein using known cardiac catheterization techniques. When an external RF field is generated at the resonant frequency of the stent, RF energy is re-radiated by the stent toward electroconductive tissue in the wall of the pulmonary vein, and produces a circumferential conduction block. The stent can be made of biodegradable materials, so that it eventually is resorbed. Following an ablation procedure, the stent may be left *in situ*. Repeated ablation can be performed using the inserted stent until it has been determined that the desired lesions have been formed. Furthermore, the same stent can potentially be used even years after being inserted should the treated arrhythmia reoccur or a new arrhythmia develop, thereby possibly obviating the need for an invasive procedure at that future time.